

# *Field Report*

## **Santa Ana National Wildlife Refuge**

### ■ **1.0 Summary**

The Santa Ana National Wildlife Refuge (NWR) lies just north of the Rio Grande and the U.S.-Mexican border in southeastern Texas. It was established over 50 years ago as a migratory bird refuge. Today the 2,088-acre site serves as a refuge to a variety of bird, plant, and wildlife. Much of the recreational activity is focused on viewing the bird and wildlife via the 12-mile hiking and walking trails and the seven-mile Refuge Drive. Refuge Drive permits biking and some auto use. A tourist tram, that has been in operation for 15 years, provides an hour-long tour of the Refuge and allows visitors to experience some of the most picturesque locations on the Refuge with minimal impact on the Refuge's natural environment.

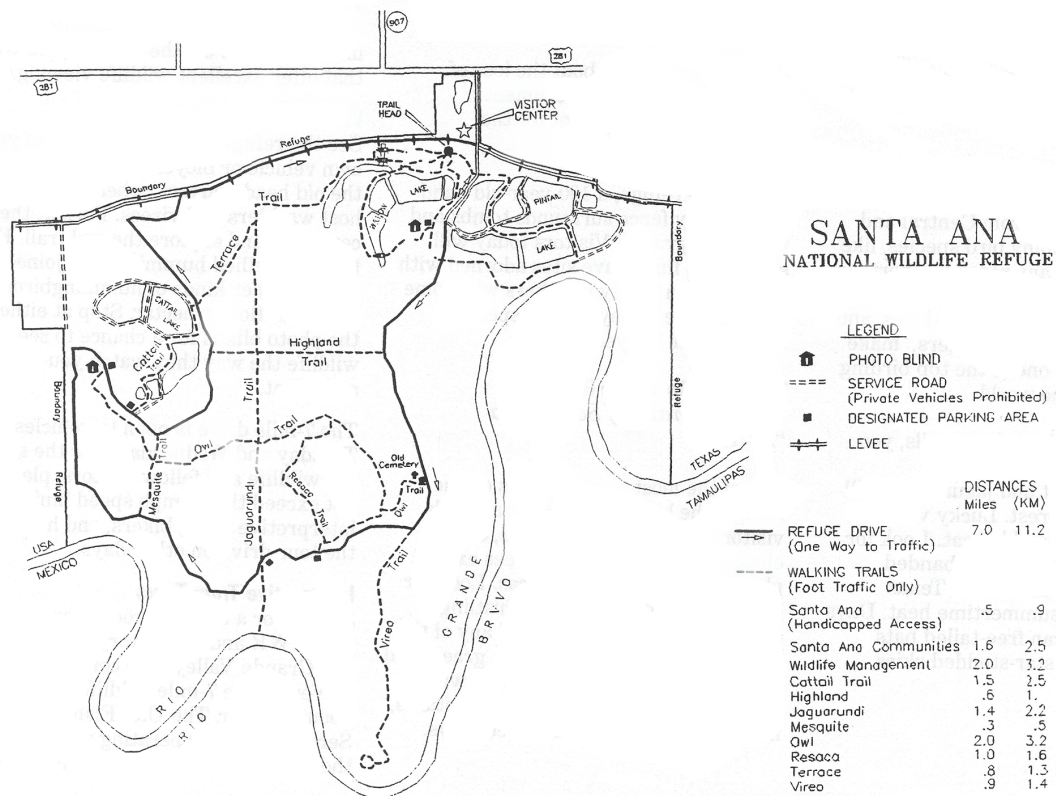
Alternative transportation strategies for Santa Ana NWR include:

- **Tram Service** – Expanding the existing tram service to seven days a week year-round; developing an on-line reservation system for the tram; acquiring a clean fuel vehicle to accommodate the increase in visitor usage; and purchasing an enclosed, climate controlled shuttle for the hot summer months would all serve to enhance the visitor experience, reduce negative impacts on the environment, and reduce the use of fossil-fueled vehicles.
- **Transit Shuttle** – A transit shuttle transporting visitors from hotels to tourist events in the region, and the Refuge would decrease dependency on cars to reach the site.
- **Pedestrian Paths** – Pedestrian paths along Refuge Drive would increase safety and encourage pedestrian use.

### ■ **2.0 Background Information**

#### **2.1 Location**

The Santa Ana NWR is located in southeastern Texas just north of the Rio Grande and the U.S.-Mexican border (see Figure 1). It lies seven miles south of Alamo, Texas and almost 50 miles west of Brownsville. The Refuge is located in Hidalgo County.

**Figure 1. Santa Ana National Wildlife Refuge**

## 2.2 Administration and Classification

Santa Ana NWR is a unit of the USFWS. It was established as a migratory bird refuge in 1943.

The headquarters of the Lower Rio Grande Valley NWR are located in the same building as the Santa Ana NWR headquarters. The law enforcement staff is shared between the two sites, but in most cases, staff are dedicated to one NWR. Santa Ana NWR has 35 full-time staff and two seasonal staff. They are assisted by 25 volunteers in the winter months.

## 2.3 Physical Description

Santa Ana NWR covers 2,088 acres. The Refuge contains a variety of habitats and a diverse mix of wildlife species. Habitats in the NWR include desert, subtropical, gulf coast, and great plains. Most of the native brush was cleared from the site in the earlier part of the 20th century. The Refuge has since protected the brush, tree, and other plant life and allowed them to grow and reclaim the site. Many of the species found in the

NWR are considered peripheral, threatened, or endangered. Over 300 species of birds and over half of all the butterfly species found in North America can be seen in the Refuge.

The NWR includes a Visitor Center near the Refuge's north entrance, 12 miles of hiking and walking trails, and the seven-mile, one-way Refuge Drive loop that traverses much of the Refuge. There are a variety of paths. Most of them are primitive; however, path A is handicapped accessible and made of concrete.

## 2.4 Mission and Goals of the Site

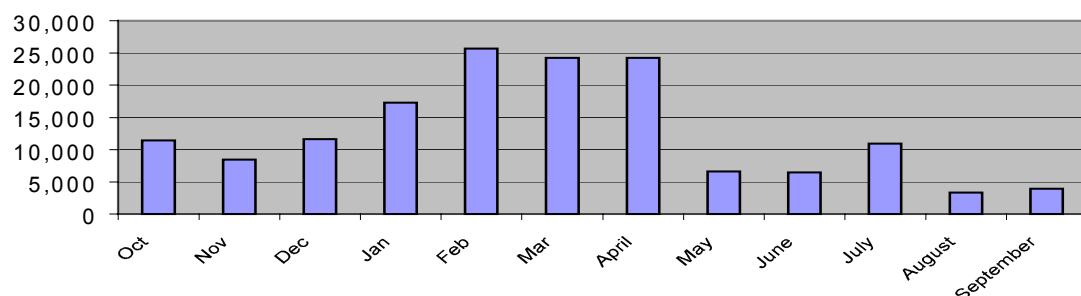
The primary goals of the Santa Ana NWR are:

- To preserve and protect south Texas wildlife, bird life, and natural habitats;
- To minimize the adverse impacts of recreational activities on wildlife and natural habitats; and
- To encourage visitors to develop an understanding and appreciation of natural environments.

## 2.5 Visitation Levels and Visitor Profile

The Refuge receives approximately 160,000 visitors per year. The peak visitor season is November through April (see Table 1). About half of the visitors come from the surrounding region and half are “winter Texans” – people who stay in the area for several months in the winter to enjoy the good weather. There are also large numbers of birders and school groups. The site is used very little in the summer due to the extremely hot and humid weather.

**Table 1. Monthly Visitation from October 1997 to September 1998**



Visitors usually come in groups of two or three per vehicle, but many full vans and buses with birders visit the site, too. There are no designated parking spaces for buses, but space has not been a problem to date (see Figure 2).

**Figure 2. Parking Area**



According to site management a half-day is the typical length of a visit.

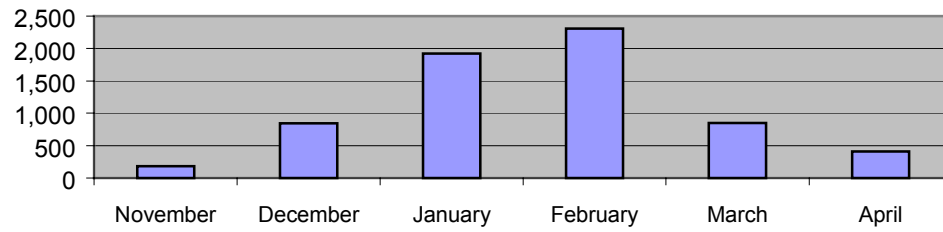
## ■ 3.0 Existing Conditions, Issues and Concerns

### 3.1 Transportation Conditions, Issues and Concerns

The primary transportation issues and concerns of the Santa Ana NWR are as follows:

- **Tram** – The NWR currently runs an open air, interpretative tram along Refuge Drive during the peak season, from Thanksgiving until April (see Figures 3 and 4). It has been in operation for 15 years. Last year there were a total of 6,520 passengers who took the tram (see Table 2). The tram service is a cooperative effort with the Valley Nature Center (VNC), a local, non-profit organization dedicated to environmental education. Two individuals are required to operate the tour, including one driver and one person to narrate the tour. Both people are supplied by the VNC. The VNC collected about \$18,000 in receipts from the service per year, February receipts accounting for 37 percent of the total income.

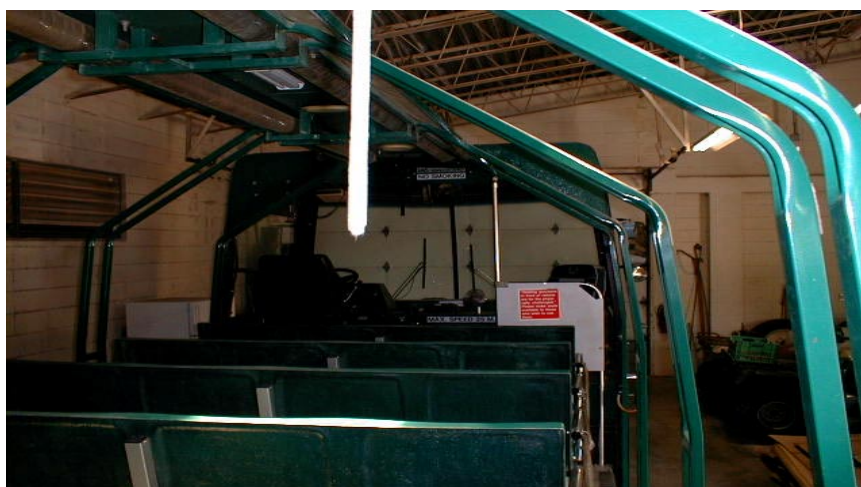
**Table 2. Tram Passengers in Fiscal Year 1998**



**Figure 3. Tram**



**Figure 4. Tram Seating**



The Santa Ana NWR supplies the tram, gasoline, and maintenance for the vehicle. Currently Santa Ana's maintenance budget for the tram is only \$5,000 per year. Maintenance costs excluding repairs (e.g., fuel, cleaning), are about \$3,000 per year. Tram repairs are not done by staff. A new tram would cost approximately \$150,000; however there is no sure funding mechanism in place for new purchases.

The tram runs Thursday to Monday each week, four times a day. When the tram is in service, all private vehicles except bicycles are prohibited from the drive. The tram and trailer can each hold up to 30 people (60 total) and makes a tour loop of 7.5 miles. Tram trips begin at the Visitor Center at 9:00 a.m., 11:00 a.m., 1:00 p.m., and 3:00 p.m. and last for about one hour. The tram runs at approximately 10 mph with occasional stops along the way. Arrangements can be made to drop visitors off in different parts of the Refuge and pick them up at a pre-determined time. The tram fare is \$3.00 for adults and \$1.50 for children, and there is no charge for school groups to receive a tour by tram. The tram does not often reach capacity.

This year the Refuge plans on running the tram seven days a week, four times a day. Private vehicles will not be allowed on the site until the end of the tram season, and then only for two days a week.

The Refuge would prefer to have a concessionaire run the tram rather than under cooperative agreement, but the small income generated makes this unlikely at the present time. In the meantime, the Refuge is pleased to have an organization with an environmental education mandate managing the effort.

- **Cars** – During the peak season, when the tram is operating, cars are allowed on Refuge Drive on Tuesdays and Wednesdays only (will be changed to Saturdays and Sundays), from 9:00 a.m. until 4:00 p.m. Most of the drive is one-way with a speed limit of 15 mph.
- **Pedestrians and Bikers** – There are many individuals who walk and bike along the tour loop. There are environmental concerns about widening the roads to better accommodate bikers and pedestrians because it will take away habitat. Bikers are restricted from the trails, and recreational bikers whose primary interest is not wildlife viewing are discouraged.
- **Roads** – Roads are primarily gravel; some areas are surfaced in asphalt (see Figure 5). Some money is available for additional resurfacing from construction funds, but the Refuge has not been able to find a contractor willing to complete the work.



**Figure 5. Refuge Road**



- **Parking Lots** – Parking lots are provided at the Visitor Center and at six locations along Refuge Drive. According to the Refuge Manager, the Refuge does not experience a lack of parking, even for special events; however the facilities do require funding for repairs and maintenance.
- **Signage** – Signage within and leading to the site is limited. The Refuge could benefit greatly from improved signage both within the Refuge (e.g., on trails) and leading to the site. The Refuge has been constrained in their efforts due to a limited budget.
- **Canoeing** – The Santa Ana NWR’s Friends of the Wildlife Corridor runs canoe tours down the Rio Grande River past the Refuge. It is not a concession, but could be one if it included an explanation of the site and made stops along the banks of the Refuge. Currently, the Refuge has no control over the canoe trips unless they enter or depart through the Refuge; now they enter the river above the site and exit below it. However, the Refuge works closely together with the Friends’ group and benefits from the group running this operation in indirect ways (e.g., improved relations with the Friends, Friends’ group donates money to the Refuge).
- **Tour and School Buses** – Tour buses and school buses often visit the Refuge. There is a \$25 fee charged per tour bus.
- **McAllen Public Transit** – There is a public transit system in the city of McAllen, but it does not serve the Refuge.

### **3.2 Community Development Conditions, Issues and Concerns**

Due to the winter Texans, the population in the area doubles in the winter. This immense population change places huge pressure on the community and the existing infrastructure.

The city of Alamo is just now realizing the economic benefits of being a gateway city to a wildlife refuge. They are trying to promote the site as a tourist attraction, but there are

limited numbers of restaurants and motels in the area. Alamo is trying to promote development of potential tourists.

Site management notes that the local Hispanic community uses the Refuge very little, and that greater efforts need to be made to reach out to and educate this community about the Refuge and its resources.

Because of the close proximity of the site with the Mexican border, there are significant problems with illegal immigrants and with drug smuggling. Santa Ana NWR is one of the few locations in that area where the density of trees and bushes offer good opportunities for cover. The Refuge Manager also stated that the Visitor Center parking lot serves as a transfer point for many “illegals” moving through the area and that visitors infrequently experience problems from “border bandits” who steal cameras and binoculars from tourists. There are only two full-time law enforcement officials for the Refuge, and they are shared with the Lower Rio Grande Valley NWR, which is 45 times larger in size than the Santa Ana NWR.

As eco-tourism grows, other birding sites are being developed nearby which will serve to attract more people to the region.

### **3.3 Natural or Cultural Resource Conditions, Issues and Concerns**

The Refuge has a unique and diverse array of wildlife and plant species that needs protection. However, there are the ongoing concerns about the loss of habitat for the endangered species that live in the area and the pressures imposed by the visiting population and development around the Refuge.

The International Boundary and Water Commission controls the Rio Grande River as the river serves as an international boundary. The river is polluted and also serves as a transportation route for drug smuggling and illegal aliens. The Santa Ana NWR only has control over the banks, not the water itself. The Refuge does contain wetlands, and some sections of the Refuge flood on a seasonal basis.

The staff would like to hold visitation at its current level or reduce individual visitors coming by auto to reduce negative impacts on the site, but increase the number of group visits (e.g., school groups, tram tours, birding groups).

The 1997 Comprehensive Conservation Plan includes investigation of some adjacent lands for acquisition. Acquisition of the sites depends on the current landowner’s willingness to sell or donate the lands. However, the Lower Rio Grande Refuge is planning to expand to 132,000 acres. They are trying to fill in the wildlife corridor to facilitate movement of animals across a larger land area.



### 3.4 Recreational Conditions, Issues and Concerns

The recreational opportunities allowed on the Refuge are limited because of the impacts on the wildlife and habitats. However, the following activities are allowed:

- Wildlife observation and photography;
- Ranger-led programs;
- Interpretive tram ride;
- Walks along Refuge trails;
- Bicycling along Refuge Drive;
- Car rides along Refuge Drive (on specified days); and
- Visit to historical cemetery (see Figure 6).

**Figure 6. Old Cemetery**



To reduce human impacts on the Refuge's wildlife, no camping, fishing, or picnicking is permitted in the Refuge; bicyclists are restricted to Refuge Drive, and private motor vehicles are only given access to Refuge Drive two days out of the week.

Birding is an extremely popular activity on the site. Birders will come from all over the U.S. and the world to see special types of birds. Butterfly aficionados are increasing as well. The spring and fall migration of butterflies to the Refuge is likely to attract more visitors over time.

There is usually a concentration of visitors by the Visitor Center. This is in part because the trail head originates here. It is also better maintained in this area, and there is less

information available on the more remote trails. The Refuge Manager would like to move more visitors to the heart of the Refuge to better distribute visitation.

Nearby recreational sites include:

- Lower Rio Grande Valley NWR;
- Bentsen-Rio Grande Valley State Park;
- Port Isabel Lighthouse State Historic Park;
- Laguna Atascosa NWR; and
- Padre Island National Seashore.

## ■ 4.0 Planning and Coordination

### 4.1 Unit Plans

The key planning documents used by the Santa Ana NWR include the Comprehensive Management Plan for Lower Rio Grande Valley and Santa Ana NWRs completed in 1997. This document also makes reference to their interpretative tram service. The Refuge began a fee demonstration project in November 1999. There is a \$3.00 charge for each vehicle entering the site.

### 4.2 Public and Agency Coordination

The USFWS coordinates Refuge management with the following organizations and agencies:

#### *Private or Non-Profit*

- Audubon Society;
- NWR's Friends of the Wildlife Corridor (non-profit);
- Public Lands Interpretive Association (PLIA) – helps parks and refuges provide concessions (e.g., books, gifts) where the site itself cannot provide them;
- Sierra Club;
- Valley Environmental Council in Harlingen; and
- The VNC.

#### *Federal*

- Lower Rio Grande Valley NWR.

### ***Local or State Public***

- Harlingen and Alamo Chambers of Commerce;
- Texas Parks and Wildlife Department; and
- Bentsen State Park.

## ■ **5.0 Assessment of Need**

### **5.1 Magnitude of Need**

The Santa Ana NWR needs for alternative transportation systems (ATS) have been well met by the existing tram service. There are opportunities to expand the service to accommodate and allow visitation at different times during the year to experience different climes and migratory patterns. In addition, access to the site is limited to auto, bike, or taxi; the Refuge would benefit from finding means to transport visitors to the site from local towns.

### **5.2 Feasible Alternatives**

Santa Ana NWR has already implemented an excellent ATS in its interpretative, open-air tram. The service should be continued with consideration of the following:

- Expanding the service to seven days a week year-round and minimizing access to the Refuge by private automobile.
- Developing an on-line reservation system on the Santa Ana NWR Web site to promote and advertise the tram.
- Acquiring a clean fuel vehicle when the current tram requires replacement to accommodate the increase in visitor usage.
- Purchasing an enclosed, climate controlled shuttle for the summer months when visitors are reluctant to engage in outdoor activities.

Because of its environmental concerns as a national wildlife refuge and its limited size, recreational biking is not encouraged, but viewing the site via bike is. The current conditions of the site already support touring the Refuge and as of this year, private autos will be prohibited on the site until April. Refuge Road serves the bicyclists more than adequately.

However, in order to increase pedestrian safety and usage, the Refuge could create dirt paths adjacent to the Refuge Road. The impact on the environment would be less than concrete paths, but they would create a safer environment for pedestrians from the bikers.

As there is no access to the Refuge other than by auto at this time, Santa Ana NWR would benefit from a transit service, which would provide pick up and drop off to the hotels in the area, seasonal tourist attractions, and the developing eco-tourism sites. This service could be provided on an hourly or on-demand basis depending on the seasonal demand.

## ■ 6.0 Bibliography

Lower Rio Grande Valley and Santa Ana NWR, Comprehensive Conservation Plan and Environmental Assessment, September 1997.

Santa Ana NWR Web site, [www.recreation.gov/detail.cfm?ID=1601](http://www.recreation.gov/detail.cfm?ID=1601).

Statistics on tram usage, visitation, and sales from Public Lands Interpretive Association's gift store provided by USFWS staff.

Various visitor materials from Santa Ana NWR.

## ■ 7.0 Persons Interviewed

Ken Merritt, Deputy Project Leader, Santa Ana NWR, USFWS